

SECTION 111319 - STATIONARY LOADING DOCK EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Top of Ground Mounted Dock Lever.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Inspect and discuss electrical roughing-in, equipment bases, and other preparatory work specified elsewhere.
 - 2. Review sequence of operation for each type of loading dock equipment.
 - 3. Review required testing, inspecting, and certifying procedures.

1.4 DEFINITIONS

- A. Operating Range: Maximum amount of travel above and below the loading dock level.
- B. Working Range: Recommended amount of travel above and below the loading dock level for which loading and unloading operations can take place.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for stationary loading dock equipment.
 - 2. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.
- B. Shop Drawings: For stationary loading dock equipment.
 - 1. Include plans, elevations, sections, details, and attachments to other work.

2. Include details of equipment assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of anchors and field connection.
3. Include diagrams for power, signal, and control wiring.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Welding certificates.
- C. Product Test Reports: For each dock leveler, for tests performed by manufacturer and witnessed by a qualified testing agency.
 1. Indicate compliance of dock levelers with requirements in MH 30.1 for determining rated capacity, which is based on comprehensive testing within last two years of current products.
 2. Submittal Form: According to MH 30.1.
- D. Sample Warranty: For manufacturer's special warranty.

1.7 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For stationary loading dock equipment to include in operation and maintenance manuals.

1.8 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.
 1. Maintenance Proximity: Not more than two hours' normal travel time from Installer's place of business to Project site.
- B. Welding Qualifications: Qualify procedures and personnel according to the following:
 1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
 2. AWS D1.3, "Structural Welding Code - Sheet Steel."

1.9 FIELD CONDITIONS

- A. Field Measurements: Verify actual dimensions of construction contiguous with stationary loading dock equipment, including slopes of driveways, by field measurements before fabrication.

1.10 WARRANTY

- A. Manufacturer's Special Warranty: Manufacturer agrees to repair or replace dock levelers that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including cracked or broken structural support members, load-bearing welds, and front and rear hinges.
 - b. Faulty operation of operators, control system, or hardware.
 - c. Deck plate failures including cracked plate or permanent deformation in excess of 1/4 inch (6 mm) between deck supports.
 - d. Hydraulic system failures including failure of hydraulic seals and cylinders.
 - 2. Warranty Period for Structural Assembly: 10 years from date of Substantial Completion.
 - 3. Warranty Period for Hydraulic System: Five years from date of Substantial Completion.
 - 4. Warranty shall be for unlimited usage of leveler for the specified rated capacity over the term of the warranty.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.2 TOP OF GROUND MOUNTED DOCK LIFTS

- A. Basis of Design: Advance Lifts Inc., Model 6568. Other acceptable manufacturers are:
 - 1. Beacon; BWL-100-5-68
 - 2. Rite-Hite
- B. General: Provide manufacturer's standard hydraulic dock lift of capacity, size and construction indicated, consisting of a safety tread steel platform with 3" vertical toe clearance between platform and the floor, steel tube scissor legs, lifetime lubricated bearings and a hydraulic operating system with controls, safety devices and accessories required.
- C. Type: Provide stationary single scissor type hydraulic dock lift for permanent top of ground installation on a concrete pad at location indicated.
- D. Rated Capacity: Provide lifting capacity of not less than 5000 lb. with 2750 lb axle load at the ends.
- E. Vertical Travel: Provide maximum vertical travel of 58 inches.
- F. Travel Speed: Provide a nominal raising speed of 13 fpm.

- G. Construction: Fabricate lift from structural steel shapes rigidly welded and reinforced for maximum strength, safety and stability. Design assembly to withstand deformation during both operating and stored phases of service. Provide mounting brackets for ease of installation.
1. Platform: Fabricate platform from heavy steel plate with beveled steel toe guards on all four sides to comply with MH29.1 (3" vertical toe clearance between platform and floor on top of ground units to comply with MH29.1). Provide matching hinged throw-over bridges with retention chains and snaps where indicated and removable handrails with safety chains.
 - a. Platform Surface: Nonskid, safety tread deck plate.
 - b. Platform Size: 72 inches wide by 96 inches long.
 2. Hinged Bridge: Provide hinged throw over bridge, heavy duty piano type hinge welded to toe guard at the end of platform, complete with lifting/ retaining chain with snap.
 - a. Bridge material: Nonskid, safety tread plate.
 - b. Bridge size: 18 inches wide by 60 inches long
 3. Provide approach ramps on both sides.
 4. Scissor Mechanism: Fabricate leg members from heavy duty formed steel tubes to provide maximum strength and rigidity.
 5. Cylinders: Equip lift with no less than two heavy duty machine grade cylinders with mechanical internal stops and return lines from breather vents to the reservoir. Cylinder rods shall be chrome plated and polished. The cylinders shall be equipped with flow controls to prevent free fall in compliance with MH29.1.
 6. Bearings: Equip lift with lifetime lubricated bearings for minimum maintenance.
 7. Hydraulic Power Unit: Manufacturer's standard self contained remotely located assembly consisting of a steel reservoir, UL listed motor, high pressure gear pump and valve manifold with pressure compensated flow control, down solenoid, check valve and relief valve.
 8. Electrical Controls: Constant pressure UP and Down pushbutton. NEMA 12 UL listed control box with magnetic motor starter with 3 pole adjustable overloads, 24 Volt 4 amp fused secondary control transformer and the entire control box assembly, not just components, shall be labeled as UL listed.
 - a. Push Button with Key Lockout
 9. Safety Devices: Provide Manufacturer's standard safety devices as follows:
 - a. Removable handrails constructed 42" high with midrail and 4" kick plate.
 - b. Manufacturer's standard safety maintenance support in compliance with MH29.1.
 - c. Top of ground units shall have a minimum of 3" vertical toe clearance between the platform and the floor when fully lowered.

2.3 FINISH REQUIREMENTS

- A. Finish loading dock equipment after assembly and testing.

- B. Finish: Immediately after cleaning and pretreating, apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat in manufacturer's standard yellow color.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for electrical systems for loading dock equipment to verify actual locations of connections before equipment installation.
- C. Examine walls and floors of pits for suitable conditions where recessed loading dock equipment is to be installed. Pits shall be plumb and square and properly sloped for drainage from back to front of loading dock.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Coordinate size and location of loading dock equipment indicated to be attached to or recessed into concrete or masonry, and furnish anchoring devices with templates, diagrams, and instructions for their installation.
- B. Place self-forming pan system for leveler in proper relation to loading platform before pouring concrete.
- C. Clean recessed pits of debris.

3.3 INSTALLATION

- A. General: Install loading dock equipment as required for a complete installation.
 - 1. Rough-in electrical connections.
- B. Attach the dock lift securely, according to manufacturer's written instructions.

3.4 ADJUSTING

- A. Adjust loading dock equipment to function smoothly and safely, and lubricate as recommended by manufacturer.
- B. Test dock lift for vertical travel within operating range indicated.

- C. After completing installation of exposed, factory-finished loading dock equipment, inspect exposed finishes and repair damaged finishes.

3.5 MAINTENANCE SERVICE

- A. Maintenance Service: Beginning at Substantial Completion, maintenance service shall include 12 months' full maintenance by skilled employees of loading dock equipment Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper loading dock equipment operation at rated speed and capacity. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.

3.6 DEMONSTRATION

- A. Train Owner's maintenance personnel to adjust, operate, and maintain loading dock equipment.

END OF SECTION 111319